



## Room to Run

### Moody's Economic Outlook for Sonoma County

**2016**  
SONOMA  
COUNTY

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# U.S. ECONOMIC OUTLOOK

## SHORT-TERM EXECUTIVE SUMMARY

### RECENT PERFORMANCE

- Depending on who you listen to and what economic data you look at, the U.S. economy is either struggling to kick into gear or is already in high gear. Those down on the economy think the recent GDP weakness has less to do with inventory accumulation, which is a temporary drag, than to a widening international trade gap that will be a more persistent impediment to growth given the global economy's struggles and the strengthening U.S. dollar.
- Those who are upbeat say the economy is creating lots of different kinds of jobs. Payrolls swelled by 2.7 million last year, on top of 3.1 million in 2014. This is the best consecutive two-year performance since 1998-1999 during the tech stock bubble. There are no bubbles today. Unemployment and underemployment are falling fast at the current pace of job growth. So, is the economy performing well or not? At this point in the economic expansion the best barometer of the economy's health is jobs. The economy is performing well.

### GDP head fake

- GDP growth has come to a near standstill. Expansion will be minimal in the first quarter after a paltry gain in the fourth quarter of last year. Job gains, however, remain robust, with no sign of slowing. The job numbers are a better representation of the reality of the economy's performance and near-term prospects.
- Measurement problems plague the GDP figures. Despite yeoman efforts by the Bureau of Economic Analysis, the source of the GDP data, a significant residual seasonality problem remains. That is, GDP has a clear seasonal pattern, with the weakest growth during the winter months. The BEA has not been able to fully correct for this seasonality.
- GDP also undergoes significant revision. The initial estimate of GDP for a quarter is revised by close to a percentage point on average in subsequent estimates as more source data become available. Big revisions also occur years later when more source data and methodological changes are incorporated into the GDP accounts. Even if the BEA got it exactly right, GDP growth would still likely be on the soft side, as productivity increases remain poor. Though hard to prove, this can be traced in part most recently to the hit that energy and manufacturing has taken. These are productive industries, and output has been hammered more than employment.
- Productivity has also struggled since the financial crisis, as that wrenching period undermined business risk-taking, which is vital to innovation, and labor mobility, which is key to getting workers into the most productive jobs. Massive reworking of the financial system engineered by Dodd-Frank and of the healthcare system by the Affordable Care Act has also played a role. These, however, are more or less transitory constraints on productivity. The downdraft in energy and manufacturing will abate by year's end, and risk-taking and mobility are picking up. Adjustment to the new regulations in the financial and healthcare systems will be over soon.

### Job machine

- It is much easier to count jobs than GDP. While the Bureau of Labor Statistics estimates jobs based on a sample of businesses, once a year it makes sure its job counts are consistent with unemployment insurance records for all businesses. In recent years, the BLS estimate of the number of jobs has been dead on. The economy is a job machine. The string of monthly job gains is the longest on record, stretching back to September 2010. More than 200,000 jobs have been created on average each month during this time. This is twice the pace of job creation needed to absorb the growth in the working-age population.

- Lots of all kinds of jobs are being created. Job growth is strong across all pay scales and nearly every occupation, industry and region of the country. The only blemishes are related to the sharp drop in oil prices and its impact on energy-related jobs and the impact on trade-sensitive manufacturing jobs from the tough global economy and strong U.S. dollar.

## Help wanted

- Everything points to strong job gains in coming months. Layoffs remain at record lows, with weekly unemployment insurance claims—the best real-time indicator of the economy's strength—about as low as they ever go. Hiring is not quite as good as in the best of times past, but given the record number of open job positions, this is either because businesses are becoming pickier in who they hire or, more likely, because they cannot find qualified workers.
- Most encouraging is the surge in the number of workers quitting their jobs. People do not leave jobs voluntarily unless they feel confident they can find new ones easily. High and rising “quits” are a tell that the economy is closing in on full employment.
- The sharp increase in labor force participation is also consistent with a tightening job market. Participation is up an astounding 60 basis points in the past six months, as the labor force expanded by 2.4 million over this period. In a typical year, the labor force will grow by no more than half that. Some of the increase in participation may be noise, as this number is derived from a small sample of households. But evidence that the increase is across all age groups suggests it is not a statistical mirage. Further, most of the increase in participation is thanks to fewer workers leaving the workforce, and less to those out of the workforce coming back in. While there is still an elevated number of workers out of the workforce who say they want a job and part-timers who want more hours, they are quickly being absorbed. At the current pace of job growth, the economy will be at full employment by summer. Though job growth will slow after that, the economy will be beyond full employment by this time next year.

## Wage revival

- Wage growth is reviving in response and is evident in the various wage data constructed by the BLS. Average hourly earnings have picked up from nearly 2% per annum through most of the recovery, to just below 2.5% most recently. Compensation shows a stronger increase, but the preferred employment cost index shows little increase.
- The BLS measures of wage growth are likely biased downward, even the ECI. The problem is that given the way the BLS measures wages, they are affected by the changing composition of workers leaving and coming into the workforce. With lots of higher-paid baby boomers leaving, and lower-paid millennials coming in, the BLS wage measures are being pushed down. Another likely factor is that marginal, lower-paid workers are finding jobs as the labor market tightens.
- Wage data collected by human resource company ADP and constructed by Moody's Analytics affirm this. The data are able to track the wages of the same individuals over time and are thus not biased by the compositional issues plaguing the BLS data. The ADP-based data show that for workers who have stayed at the same job over the past year, wages are up a strong 4.8% through March. This is approximately 2 percentage points stronger than wage growth using the ADP data but based on the BLS methodology for measuring wages.
- According to the ADP-based data, wage growth is also accelerating, consistent with a tightening job market. A year ago, wages for the same workers on the job more than a year were rising by 3.8%. This is a 100-basis point acceleration in wage increases in just the past year. Adding credence to the ADP-based data is that wage growth for all workers, including job switchers, is consistent with wage growth as measured by the BLS.

## More consumption, Fed tightening

- An economy at full employment and with stronger wage growth will be a substantial tailwind to consumers. Not only will consumers have more income to spend, but their psyches should get a lift. People likely judge their financial well-being through the prism of their pay. Are their pay increases this year bigger than last, and are the increases beating inflation? For most of the recovery, the answers were no and no. Until now. With wage gains picking up, so too should consumer confidence. Sustained strong consumer spending growth is vital to the U.S. economic recovery, and even to the global economy.
- A full-employment economy and stronger wage growth also imply that the Federal Reserve will soon resume its

normalization of monetary policy. The Fed raised rates off the zero lower bound in December but has been on hold since, given the weak global economy and turmoil in financial markets at the start of the year.

- But the Fed cannot wait much longer to resume increasing rates, as its full-employment mandate has been nearly met. Inflation is still below the Fed target of 2%. But it will not be for much longer, given the strengthening wage growth that will pressure businesses to raise prices more quickly. Reinforcing the case are sturdy rent growth and an anticipated pickup in healthcare inflation as some of the constraints resulting from healthcare reform fade.
- The longer the Fed fails to respond to the tightening job market, the greater the risks that it will need to raise rates more quickly next year and the year after to catch up. This is the classic dynamic that has done in most other business cycles. The Fed can still forestall it but not for much longer.

## FORECAST ASSUMPTIONS

### Monetary policy

- The Federal Reserve remains cautious in normalizing interest rates. It began the normalization process at the mid-December Federal Open Market Committee meeting, raising short-term rates by 0.25 percentage point from the effective zero lower bound that had prevailed since the financial crisis, but has signaled the next rate hike will not occur until the June meeting.
- Rate normalization will be a lengthy process. If the economy performs consistently with the Moody's Analytics outlook, short-term interest rates will not normalize until the second half 2018, well after the economy has returned to full employment and inflation is back to the Fed's 2% target.
- There is a consensus that the federal funds rate consistent with normalization has fallen since the crisis, but there is little consensus as far as how much. Moody Analytics estimates the long-run equilibrium rate to be 3.5%, down from more than 4% before the crisis. Recent forecasts provided by Fed officials of the funds rate in the long run would suggest an estimated equilibrium rate to be a bit lower at approximately 3.25%. This is equal to the sum of the Fed's 2% inflation target, the economy's potential growth rate, and the impact of various economic headwinds.
- The most significant headwind is likely the higher required capitalization and liquidity of the post-crisis banking system. If regulators require banks to hold more capital and be more liquid, then the banks' return on equity and assets will be lower. So, for the system to extend the same amount of credit to the economy at the same lending rates, its cost of funds needs to fall by a like amount as its returns. That is, banks' lending margins must be maintained. This can be done if the Fed adopts a lower equilibrium rate, and thus lowers banks' cost of funds.
- The economic outlook is based on a steady but orderly rise in long-term rates. Long-term yields will not fully normalize until global central banks end their quantitative easing programs and the Fed's balance sheet shrinks—likely not until about early in the next decade.

### Fiscal policy

- The federal government's situation is stable. Lawmakers reached a budget deal that sets tax and spending policy into early 2017. The Treasury debt limit was also increased sufficiently so that it will not be an issue until the second half of 2017. Based on the budget deal and the economic outlook, the federal budget deficit is expected to come in at more than \$500 billion this fiscal year, equal to 2.8% of GDP. Given the budget deal, fiscal policy will be a small positive for growth in 2016, adding about 0.2 percentage point to real GDP growth.
- Under current fiscal policy, Washington will come close to the goal of achieving fiscal sustainability—future budget deficits that are small enough (near 3% of GDP) that the nation's debt-to-GDP ratio stabilizes, at least through the remainder of the decade. This will be enough to satisfy financial markets and allow the recovery to gain traction as anticipated in the Moody's Analytics baseline outlook.
- Deficits and debt will begin to mount again later this decade, given prospects for large increases in entitlement spending. Further policy changes will need to be made and are assumed in the outlook.

## U.S. dollar

- The value of the U.S. dollar is up substantially against nearly all other currencies over the past two years, rising about 15% on a real broad trade-weighted basis. The strong U.S. dollar reflects stronger U.S. economic growth and prospects for monetary policy normalization, and disappointing growth and further monetary easing in much of the rest of the world. Further dollar appreciation is likely, assuming the Federal Reserve will normalize U.S. monetary policy by mid-2018, but the European Central Bank will continue with its extraordinary actions, including quantitative easing and negative interest rates, until near decade's end. While the long-run fair value euro/dollar exchange rate is an estimated \$1.25, the euro is expected to fall briefly below parity with the dollar by this time next year.
- The dollar will also appreciate further against the Japanese yen, with the yen peaking at close to ¥135 per dollar. The dollar is expected to remain strong against the currencies of most emerging economies as the Fed normalizes, but to depreciate slowly and unevenly against these currencies over the long run. On a real broad trade-weighted basis, the dollar is still not much above its average value since it began to freely float in the early 1970s. The dollar will remain the global economy's principal reserve currency for the foreseeable future.

## Energy prices

- Oil prices have plummeted from more than \$100 per barrel in summer 2014 to near \$35 per barrel recently. Behind the slump in oil prices was the previous ramp-up in global oil production, particularly among U.S. and Canadian shale oil producers, and the decision by Saudi Arabia not to curtail its production to accommodate the greater North American production. Oil prices should be near their bottom and are expected to slowly make their way back. Underlying this outlook is the apparent sharp pullback in investment in North American shale oil production. Rig counts have been cut by more than half, and production has begun to decline.
- Global oil demand should receive a lift from the lower prices, illustrated by the recent strength of vehicle sales in the U.S., particularly for gas-guzzling large sport-utility vehicles and light trucks. Nonetheless, do not expect oil prices to top \$100 per barrel for another decade.
- Natural gas prices will remain low, particularly compared with oil prices, for the next decade. There is a substantial glut of natural gas as demand has not fully recovered from the recession and supply has increased given the surge in shale gas production.

# FORECAST RISKS

## Global slowdown

- Softer global demand, particularly in China and Europe, will hurt domestic exports and could cause GDP growth to fall short of expectations should the situation deteriorate further. The slowdown in China's economy weighs heavily on emerging economies in Asia and Latin America and also threatens the recovery in Europe. These concerns have led to steep corrections in international equity markets and increased volatility in U.S. markets. Further, Chinese policymakers seeking to stimulate growth could fumble in their efforts, creating even greater uncertainty. Slower global expansion will have an adverse impact on Midwest factories and coastal shipping hubs and is already subtracting from U.S. output growth. The risk is that it will persist for longer than anticipated.
- The weakness in global demand for U.S. exports will be aggravated by a stronger dollar. The strong dollar has squeezed exports and lowered earnings of U.S. multinational companies. The impact is most pronounced in low-value-added industries that already struggle with fierce international competition. The divergence between U.S. monetary policy and other developed nations could cause the greenback to strengthen more than expected. The baseline forecast already assumes that the dollar will appreciate relative to the euro and the yen, as central bankers in these regions have initiated large-scale quantitative easing programs that will weaken their currencies. If foreign policymakers adopt even more expansionary policies, or if U.S. rates rise faster than expected, the dollar will rise above the baseline forecast, further widening the trade deficit and causing GDP to fall below expectations.

## Monetary policy

- A misstep by the Federal Reserve in normalizing monetary policy could derail the U.S. expansion. The baseline forecast assumes the Fed will next raise interest rates following the Federal Open Market Committee's June meeting. In the past the Fed has increased rates faster than was outlined in policy statements, which could catch investors off guard. Should the Fed raise rates too soon, it might be forced to reverse course, possibly introducing a new round of quantitative easing or even negative interest rates. The majority of market participants expect the Fed to raise rates only once in 2016, but the Fed is projecting two rate hikes. A disconnect between the Fed and market expectations could lead to an upward shift in the yield curve, raising borrowing costs just as the U.S. economy is building momentum. Additionally, market expectations influence financial decisions, which in turn affect output, employment and inflation.

## Geopolitical tensions

- Global tensions pose an indirect threat to the U.S. economy through the channels of global trade, consumer sentiment and financial markets. The conflict between Ukraine and Russia has led to a standoff between Russia and the West. The U.S. recently extended sanctions on Russia for 12 months; the EU extended its sanctions by six months. With no resolution in sight, sanctions could push Russia deeper into recession. This could further weaken demand for euro area exports, especially from Germany, and undermine the region's fragile recovery.
- Conflicts in Iraq and Syria threaten to further destabilize the region. While the war against the Islamic State has been confined to Iraq and Syria, it could spread to other Middle Eastern countries, risking increased intervention by the West. The worst-case scenario involves an escalation of tensions in the region, especially between Saudi Arabia and Iran, that could cause not only a spike in oil prices but also greater turmoil in global financial markets, leading to a drop in trade and slower global growth. Furthermore, instability in the region has triggered an exodus of refugees, stressing the EU's immigration system and severely testing European cohesion.

## Interest rates

- While an unexpected spike in interest rates would disrupt the baseline outlook, other factors suggest that long-term interest rates will remain low for an extended period. The divergence between U.S. and international growth rates, exacerbated by the slowdown in China, will drive international investors to safer U.S. government debt. An aging world population also will lift demand for safe assets and weigh on yields, with the uptick in demand occurring during a period of diminishing supply. U.S. government spending is not expected to rise for several years, reducing the need to issue debt as deficits shrink. With fewer "risk-free" bonds available for purchase, yields will remain low for an extended period. As a result, nonresidential investment and housing market activity could exceed expectations.

## Oil

- Depressed oil prices present both upside and downside risks to the forecast. Low oil prices are keeping the price of gasoline low, which benefits consumers, as money not spent on gasoline can be spent on other goods. This is illustrated by the recent strength in vehicle sales, particularly for less fuel efficient SUVs and light trucks.
- However, the longer oil prices remain low the more damage is done to U.S. oil producers. Oil prices under \$40 a barrel have made drilling in many domestic oil fields uneconomical. While existing wells will still operate, the real damage is to exploration and investment. Overburdened by debt, U.S. energy firms will struggle to meet their obligations as losses mount. Bankruptcies, mergers and acquisitions will likely follow, as well as further cuts to domestic oil production. If oil prices fail to rebound to the baseline forecast, increased financial market volatility and declining non-residential investment will weigh on growth.

# Regional Economic Outlook

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## **SUMMARY** [\(back to top\)](#)

Sonoma County's economy has fully recovered from the Great Recession and is building momentum, with output, employment and incomes rising at a faster pace than the U.S. average. The economy's principal drivers—wine-making, food manufacturing, travel and tourism—are fully engaged, and tech-related services also provide support. The labor market is fast approaching full employment, and greater competition for workers is beginning to lift wages. The jobless rate is falling more quickly than the U.S. average even amid steady labor force growth, and at 3.8% as of March, ranks among the lowest in California.

However, there are factors in the economy that still need to engage to ensure longer-term growth. For example, growth of high-wage jobs—in industries such as technology and high-value services—were late to gain traction and have only begun to contribute to income and productivity growth in recent years. Although house prices have been rising strongly, single-family homebuilding has yet to meaningfully accelerate, as affordability erodes. Finally, while household balance sheets are sturdy, consumers are reluctant to take on new debt, preventing a broader acceleration in consumer spending from taking hold.

Despite these challenges, Sonoma County's economy will accelerate as firming U.S. consumer confidence and rising incomes drive demand for high-quality wines and support the county's buoyant tourism industry. High tech and manufacturing will contribute less to growth than in previous business cycles but still support the economy. Over the long term, the travel and tourism industry, with increasingly broad offerings, coupled with a skilled and innovative workforce will help Sonoma's economy keep pace with the U.S. in job and income gains.

Attracting new investment in Sonoma's technology-producing industries and promoting the sustainable expansion of the county's wine, specialty foods, and tourism clusters will be critical to growth over the long term. Efforts to promote entrepreneurship and to train a new generation of skilled workers will be equally important to the county's long-term success.

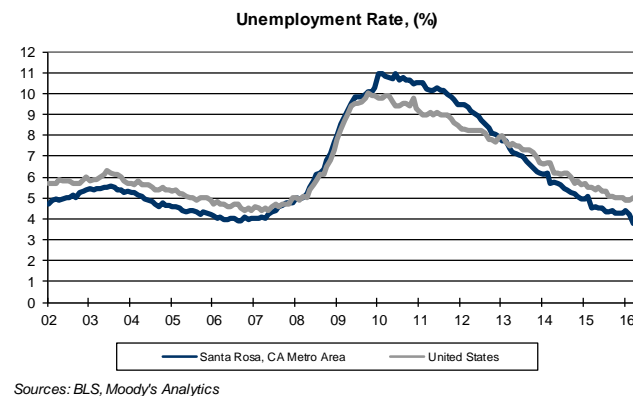


## RECENT PERFORMANCE [\(back to top\)](#)

- Job additions in Sonoma County have outpaced the U.S. average since the local recovery began nearly four years ago. The unemployment rate has fallen sharply even amid strong labor force growth, and the tightening labor market is lifting wage income and total personal income growth.



- Not only is the unemployment rate falling, but the gap between the U.S. and the local rate has reversed. The jobless rate has fallen more quickly than the U.S. rate since 2013. At its peak, the local jobless rate was 1 percentage point above the national rate. But as of March, Sonoma County's rate sits 1.2 percentage points below the national average.



- Leisure and hospitality and healthcare lead job gains, but food and beverage manufacturing increasingly lends a helping hand. Local food manufacturers have added more than 2,000 jobs in the past three years, helping to bring overall manufacturing employment back to its level in 2005. Nevertheless, the number of manufacturing jobs remains more than two-thirds below its 2000 peak during the tech boom.
- Recent infrastructure improvements at Charles M. Schulz-Sonoma County Airport are boosting tourist visits to the county. As of December, air passenger traffic at the

airport was up 10% from a year earlier. The lengthening of the airport's main runway in 2014 has helped bring about a rise in business and leisure travel. Sonoma County has also benefited greatly from rising tourist travel through San Francisco International Airport.

Santa Rosa, CA Metro Area Employment, Recent Performance March 2016					
	Annualized growth rate				
	3-mo	6-mo	12-mo	5 yr	10 yr
Total	2.2	2.5	3.0	3.2	0.8
Construction	-9.9	-3.1	-1.5	6.4	-2.8
Manufacturing	2.9	1.2	1.2	1.5	-0.4
Wholesale Trade	-6.5	-1.4	0.7	2.1	-0.2
Retail Trade	11.7	1.3	1.8	2.8	0.6
Transportation and Utilities	16.3	1.7	-0.6	1.9	0.6
Information	-2.1	-1.4	-0.6	2.1	-2.6
Financial Activities	1.4	2.1	1.9	0.9	-2.0
Professional and Business Services	-4.4	8.3	7.3	3.3	0.0
Education and Health Services	6.0	2.0	4.4	5.9	4.3
Leisure and Hospitality	-0.5	10.7	7.4	5.2	2.5
Government	4.8	-1.1	0.9	0.8	0.6
	Percent				
Unemployment rate	4.1	4.2	4.3	6.8	7.0

- According to Smith Travel Research, hotel occupancy rates rose just 1.6% from 2014 to 2015, but at 76% they have returned to their long-run average. Further, the average daily room rate in county hotels rose 9% in 2015, reflecting firming pricing power.
- The housing market is strong in Sonoma County but imbalanced between supply and demand. Although house prices are rising at nearly twice the national rate and have recovered three-quarters of the value lost in the recession, single-family homebuilding has not meaningfully accelerated since hitting bottom in late 2009. New multifamily units have accommodated most new households. However, there is significant pent-up demand for housing in the near term, as evidenced by the falling rate of single-family completions to household formations. Stronger income growth will be the catalyst to unlocking pent-up demand, but it will still take several quarters of solid income gains for the housing recovery to accelerate in earnest.
- Household balance sheets are in solid shape, and consumer credit quality is improving across loan categories. Mortgage, bankcard and automobile delinquencies have fallen back to their prerecession rates, according to Equifax. However, the dollar volume of total balances has risen only moderately, and consumers' reluctance to take on new debt has kept a lid on spending.

## NEAR-TERM OUTLOOK [\(back to top\)](#)

- Sonoma County's economy is expected to continue to expand, although growth will decelerate slightly in the near term as the economy reaches full employment and remaining slack in the labor market dissipates. With payroll employment and output well above their prerecession peaks, job growth is expected to cool from its 3% year-on-year pace. Nonetheless, the strengthening U.S. economy will lift Sonoma County's key industry clusters. As U.S. consumer confidence firms and wage growth strengthens regionally and at the national level, Sonoma County's leisure, hospitality and wine industries will strengthen. Improving business investment spending should also support local technology-producing industries to expand.

## TRAVEL AND TOURISM

- Tourism in Sonoma County ramped up considerably in 2015, and early figures in the first few months of this year point to continued strong growth. Tourist visits to the county have fully recovered from their post-recession nadir and both hotel occupancy rates and per-room revenues are approaching all-time highs. Job growth in leisure and hospitality industries is surging. Industry employment has risen by an average annual rate of nearly 5% over the past four years. This rapid pace cannot be sustained over the long term, but job gains in the industry will outpace the state and national averages.
- The positive near-term outlook for tourism is underpinned by low gasoline prices, firming consumer confidence, and stronger wage growth that will raise household disposable incomes across the West and nationwide as the economy reaches full employment. Most visitors—including out of state and international tourists—arrive by car. Gasoline prices, while now up from cyclical lows late last year, will remain affordable this year, clearing space in visitors' budgets for more spending on local attractions as well as on accommodations.
- Job growth in Sonoma County's tourism cluster—one of the nine identified by the Economic Development Board—has been among the steadiest of all clusters since the end of the Great Recession. The county's tourism industry also ranks among California's top performers in terms of destination spending and occupancy.

- Sonoma County's prestige as a premier international destination for wine-making and tourism has helped to draw increasing numbers of international tourists over the past two decades. However, with slower growth in China and emerging markets and the appreciation of the U.S. dollar, Sonoma's tourism will rely less on international tourists for near-term growth. Fortunately, a rise in domestic tourists will more than make up for any shortfall in international arrivals. According to the Conference Board, the share of Americans planning a vacation in the next six months is close to a two-year high, and rising incomes will unleash pent-up demand for travel among high-income and budget-conscious travelers alike.
- Sonoma County's tourism will also benefit from local tailwinds. Rapidly rising incomes for high-tech workers in the Bay Area are driving an increase in day trips to Sonoma's wine country, and this trend will strengthen as incomes rise for workers in a variety of industries in the Bay Area.
- Despite the rapid rise in labor costs, Sonoma County's leisure services will retain pricing power in the near term. According to the Quarterly Census of Employment and Wages, average weekly pay for leisure and hospitality workers has risen by nearly 4% over the past year, but per room revenues for hotels have increased even faster. Pricing power will be more prevalent at higher-end accommodations than among lodgings that cater to budget-conscious travelers, but spending constraints for middle-income visitors will begin to ease this year as wage growth accelerates.

## *AGRICULTURE, FOOD AND WINE*

- Demand for Sonoma wines will strengthen further this year as disposable incomes grow nationwide, propelling sales of fine and premium wines. Although total domestic wine consumption grew slowly in 2015, sales of higher-end wines, including those produced in Sonoma County, surged as consumers across the demographic spectrum traded up to higher-priced bottles. The lighter 2015 crop has helped to bring inventories closer to balance. The tightening of supply, coupled with rising demand for higher-end wines, will give Sonoma wineries a slight edge in pricing power. Growth in on-premise sales will deliver a boost to smaller wineries that rely more heavily on visitor traffic for sales.

- Demand for wines produced in Sonoma County is expected to strengthen this year and next as higher-end wine consumers shift toward quality after favoring lower-priced bottles in the wake of the recession.
- Despite its lower quantity, all signs point to the 2015 harvest as another year of exceptional quality. California's persistent drought is showing signs of easing. Further, greater rainfall during the winter months bodes well for the quality of the 2016 crop, and mild weather during the critical period of bud break should bring the size of the 2016 vintage in line with historical averages. Another light crop would not be desirable, as it would crimp revenues for winemakers and growers alike.
- Direct shipments from domestic wineries in 2015 jumped 8.1% in value to \$2 billion, well ahead of the value of U.S. wine exports. Sonoma County wines hold a dominant position in the direct shipping market, accounting for 23% of all sales, second only to Napa among U.S. wine-growing regions. Despite an increase in cases shipped, total revenues for Sonoma wineries fell 4% as average bottle prices fell for the third consecutive year. Nevertheless, the present year bodes well for direct sales, with Massachusetts becoming the 40th state to permit direct-to-consumer shipments, and large holdout states, such as Pennsylvania and Delaware, moving closer to legalization.
- The long-term outlook for Sonoma vintners remains bright, but the increasing importance of millennial drinkers will pose several challenges. First, millennials are still far from their prime earning years and lack the wherewithal to purchase better-quality wines and to consume more. As the boomer generation begins to taper consumption and budget-constrained millennials step into the driver's seat, total wine consumption will rise more slowly. Second, while millennials consume more wine than other generations did at their age, they have shown a greater preference for foreign wines. Finally, numerous surveys indicate that millennials rely on label design, rather than grape origin, in informing consumption decisions. Millennials may thus prove a tougher sell for Sonoma vintners, many of which have staked marketing efforts on grape varietal.

- Further appreciation of the dollar poses the greatest risk to the outlook for Sonoma's wine industry. All else equal, a strong dollar will make foreign wines more expensive for foreign consumers while raising the purchasing power of domestic drinkers vis-à-vis foreign wines. Foreign wine producers made further inroads into the U.S. market in 2015. Total imports rose 3% to \$6 billion, propelled by sales of French and Italian wines. Despite the sharp depreciation of Latin American currencies relative to the U.S. dollar, imports of Argentine and Chilean wines fell for the second straight year after nearly a decade of uninterrupted growth.
- The surging popularity of craft beer will be a net positive for Sonoma County as its craft breweries gain in prominence and consumers shift away from mass-market offerings in favor of craft and small batch beers. The county is home to several prominent craft brewers, and plans to increase local production will bolster manufacturing, transportation/warehousing, and tourism. However, craft beer is rapidly increasing its share of the adult beverage market, and an increasing preference for craft beer among younger cohorts could pose a risk to wine sales.

## TECHNOLOGY

- Sonoma County's technology-producing industries will support the economy but will contribute only modestly to job growth. Large tech employers such as Keysight Technologies, Medtronic and Cyan retain a large research and development presence in the county, but have steadily shifted manufacturing jobs to lower-cost areas in the U.S. and overseas. As a result, employment in Sonoma County's high-tech industries has contracted sharply since the 2001 tech bust and has declined further in the aftermath of the Great Recession.
- Although job losses have since stabilized, employment has remained nearly flat over the past three years. This is in contrast to booming tech-producing industries in Silicon Valley and the steady recovery in tech employment nationally.
- Despite the declining prominence of technology manufacturing industries in Sonoma County, many firms and entrepreneurs from the 2000 tech boom have survived and

still call Sonoma County home. There is an indication of remaining comparative advantage for tech-producing industries in terms of its skilled labor pool, installed base in the county, and proximity to tech-producing areas elsewhere in the Bay Area.

- Hiring in high-tech industries will accelerate modestly over the next few years as Sonoma County's IT, biotech and telecommunications firms ramp up R&D. However, the increasing cost competitiveness of emerging markets will be a formidable risk. As developing countries scale the value-added chain, R&D operations are increasingly cost-competitive. The globalization of local research operations could put additional jobs in peril.
- Investment in information technology has been less than stellar over the course of the current business cycle, but demand for higher internet connection speeds will play to the advantage of local tech firms in the medium term. Sonoma County's broadband hardware and electronic testing firms have benefited from a federal stimulus for rural broadband systems as well as from the upgrading to gigabit connection speeds for business and personal use. Robust growth in consumer electronics, and in particular smartphones and smart household appliances, has been an additional source of support for the county's electronic testing makers.
- The federal Affordable Care Act has the potential to benefit Sonoma County's medical device manufacturers. The higher number of insured households will expand the pool of possible recipients of medical devices designed and manufactured in the county. Further, an aging population will bolster demand for an array of medical and testing equipment.
- Rising demand for green technologies is a further source of potential growth. These may include over the long term a broad set of industries that improve efficiency of water use; enhance lighting, heating and cooling efficiency of buildings; or allow agriculture to make better use of land and water resources. The county is among the state's top counties in terms of installed or in-development solar capacity, ahead of several larger Bay Area and Central Valley counties and is home to one the largest wholesalers of solar equipment in the U.S. Sonoma Clean Power, a public provider of electricity from clean sources, is now the county's default electricity provider, and



surrounding counties' interest in replicating Sonoma Clean Power's success could draw further investment.

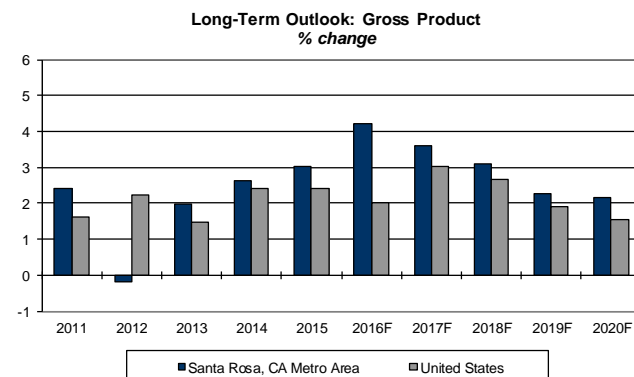
## *CREATIVE PROFESSIONAL SERVICES*

- Moody's Analytics defines creative professional services as those that play a primary role in the transformation of an idea into a commercial product. These may include, on the one hand, a broad range of scientific researchers, software developers, and engineers whose output is measured by patents. The second component of the cluster is composed of the creative arts, which corresponds to the copyright-protected industries: journalism, advertising, media, arts and entertainment. Together, the two components make up 4.6% of the county's total payroll employment, or approximately 9,100 jobs.
- The outlook for Sonoma County's creative cluster of industries is generally bright, but slower growth in the science and technology share of the cluster will temper its near-term prospects. Employment in creative industries has increased faster than in the rest of Sonoma County's economy over the past year thanks to rapid growth in engineering and scientific consulting services, but there is still much ground to recover. Employment in tech-related services such as software development and life sciences research has remained largely flat during the recovery while the two industries rebounded swiftly at the state and national levels. As a result, the creative cluster's share of the economy has fallen below the average for the Bay Area and the state.
- Sonoma County is home to a vibrant entrepreneurial culture, and startup activity in information technology, biotech and medical research is on the rise, as evidenced by recent growth in venture capital placements and in the number of new establishments in high-tech fields. However, hiring by smaller firms has yet to move the needle on total tech employment, and efforts to draw larger tech firms to the county have yet to bear fruit.

- Sonoma boasts a thriving arts community, and the share of total employment in the creative arts is among the highest of midsize counties. As the local labor market tightens and income growth solidifies, artists and performing arts companies will benefit from increased discretionary spending on arts and entertainment. Sonoma is fast-emerging as a hub for visual and graphic design, and wineries' push for more distinctive labeling will bolster design professionals.
- Longer-term public support for the arts from organizations such as Creative Sonoma could help make them more prominent. Longer stays by tourists could boost the creative component of the arts as Sonoma-bound tourists look for other leisure opportunities.
- As the U.S. economy improves, rising tourist visits to Sonoma County will lend upside potential to the creative arts. Local art galleries and performing arts companies will benefit as consumer sentiment strengthens and visitors to Sonoma County's wineries seek broader options for leisure. Integrating the arts into the tourist experience will not be easy since wineries will remain the primary tourist attraction, but recent efforts by local arts councils to promote local galleries and performing arts companies are a good start.

## LONG-TERM OUTLOOK: POSITIVE FACTORS [\(back to top\)](#)

- Sonoma County's basic industries such as its wineries and craft breweries, specialty food makers, travel and tourism, and technology production hold considerable long-term growth potential. These industries build on the comparative advantages that are inherent in the county's resources—its workforce, its natural resources, and its capital.



- These resources are abundant. For example, educational attainment is relatively high among the county's workforce. According to the 2014 American Community Survey, 32.6% of the adult population has a college degree, which is above the U.S. rate of 29% and slightly ahead of the California average of 31%. Its natural resources are bountiful, as evidenced by its rich soil, mild climate, extensive shoreline, and forests and parklands. The county has built up local capital through entrepreneurship over the last three decades, and its capacity for innovation, as measured by utility patents per capita, is among the highest of midsize U.S. counties.
- The long-term outlook for Sonoma County winemakers is particularly favorable given the industry's deep roots in the county, its moderate growing climate, and rising demand for more sophisticated wines in domestic and global markets. Total wine consumption in the U.S. surpassed that of France in 2010 and has plenty of room to rise, given that U.S. wine consumption on a per capita basis is just one-third that of Europe. Longer term, emerging markets will also provide an avenue for growth as incomes rise and consumers develop a taste for wine.
- Sonoma County's prestige in wine-making and the increasing renown of local craft breweries confer a positive long-term outlook for tourism. The region is gaining recognition among domestic and international visitors not only for the quality of its wines, but also for its natural beauty, abundant outdoor recreational opportunities,

and high-end dining and hospitality options. The increasing prominence of local craft breweries as well as the expansion of the visitor experience toward spa and wellness programs adds further long-term potential. As the global economy gathers steam once again, Sonoma's reputation will help attract a greater number of international visitors, which tend to spend more on travel and accommodations than U.S. tourists.

- Sonoma's numerous craft breweries will lend additional upside potential to tourism and manufacturing. Craft breweries have drawn an increasing number of visitors to the county in recent years, helping to boost direct tourism spending. The expansion of craft brewers will also create additional jobs and generate spillover growth in transportation and warehousing.
- Specialty food products have the long-term potential to complement the wine industry within the region. These include olive oils, cheeses, and a range of organic vegetables and meat products. Such goods are linked to tourism as well, as visitors sample these products locally and then generate new markets once they return home.
- Although Sonoma County's top tech employers have steadily reduced their manufacturing presence in the county, high-tech research and development holds potential for growth, provided that local engineering and entrepreneurial talent can be cultivated. Research and development positions create fewer direct linkages with other industries than do manufacturing jobs, but given high salaries for biotech and IT workers, R&D jobs hold the potential to drive indirect job growth in housing, construction, and consumer-related industries through large spillover effects.
- The cost of doing business in Sonoma County is low compared with that of its Bay Area peers. According to the Moody's Analytics Cost of Doing Business Index, Sonoma County's business costs were the second lowest in the nine-county San Francisco Bay Area as of 2014, the most recent year in which the index is available. Relative to the U.S., business costs are 23% lower than those in the San Francisco metro division (San Francisco and San Mateo counties) and 27% lower than those in the San Jose metropolitan area.

Index of Relative Business Costs - 2014										
	Labor Cost		Tax Burden		Energy Cost		Office Space		Overall Index	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank		Rank
<b>Santa Rosa, CA</b>	<b>96</b>	<b>237</b>	<b>99</b>	<b>333</b>	<b>179</b>	<b>373</b>	<b>80</b>	<b>326</b>	<b>101</b>	<b>358</b>
San Francisco-Redwood City-South San Francisco	126	399	97	154	179	373	104	388	124	399
San Jose-Sunnyvale-Santa Clara	119	395	96	287	179	373	114	393	123	398
Oakland-Hayward-Berkeley, CA Metropolitan Division	105	319	98	314	179	373	87	357	108	382
Denver-Aurora-Lakewood	113	386	63	18	96	172	78	312	96	315
Seattle-Bellevue-Everett	105	315	83	154	99	213	104	387	103	369
Portland-Vancouver-Hillsboro	96	170	85	204	87	103	101	380	96	307
Sacramento-Roseville-Arden-Arcade	99	228	99	335	179	373	79	319	103	365
Salt Lake City	102	276	85	200	81	335	71	250	88	192
<b>Notes:</b>										
1) Rank is out of 401 metro areas.										
2) U.S. average=100.										
3) Labor costs are measured by total earnings per employee at the 3-digit NAICS level.										
4) Tax burdens are measured by all taxes excluding severance, education, and hospital taxes relative to personal income.										
5) Energy costs are measured by cents per kWh for industrial and commercial users.										
6) Office costs are measured by rent per square foot.										
7) In the overall index, labor costs have 65% weight, energy costs have 15% weight, and office costs and taxes have 10% weight.										

## LONG-TERM OUTLOOK: NEGATIVE FACTORS [\(back to top\)](#)

- The highly specialized nature of Sonoma County's economy is its greatest source of vulnerability. The county's industrial base is highly concentrated, as evidenced by its low industrial diversity index score of 0.43. Sonoma's principal economic drivers—viniculture, tourism and high-tech R&D—are all highly sensitive to the ebbs and flows of the business cycle, creating the potential for more volatile swings in output and employment over the long run. This is indicated by the area's volatility index of 190, which ranks in the 90th percentile of U.S. metro areas and divisions. Should the U.S. economy falter on its path to long-term expansion, Sonoma's reliance on consumer-driven industries and volatile tech services could result in another sharp downturn.
- A shortage of high-wage jobs is another source of weakness. Although hiring in high-paying occupations is gathering steam, Sonoma has yet to recover all of the high-wage jobs lost in the Great Recession, in contrast to the strong rebound at the state and national level. Meanwhile, the share of employment in high-paying positions has contracted over the past two business cycles and has fallen slightly below the U.S. average. The relative shortage of high-wage jobs will curtail the county's ability to attract new residents and will be a weight on in-migration and population growth.
- Low housing affordability and high living costs will also contribute to slower population expansion. Although housing affordability spiked in the wake of the housing bust, reaching a two-decade high in 2012, affordability has since returned to its long-run average and will decline further over the next two years as house price gains outpace growth in median household incomes. Low housing affordability will price many lower-income families out of the county's housing market and could result in a shortage of workers necessary for the expansion of Sonoma County's labor force.
- Congestion and the need for infrastructure improvements may also limit long-term growth potential. Despite current highway improvements, access to San Francisco and Oakland is limited to roads that are frequently congested, with reduced traffic speed. This is particularly important, since most goods and visitors flow in and out through these areas and rely on their airports and ports for longer journeys. The improvement of Highway 101 is a long-term project that will eventually speed travel

times to Marin County and San Francisco, but higher traffic volumes will ramp up transportation costs in the meantime.

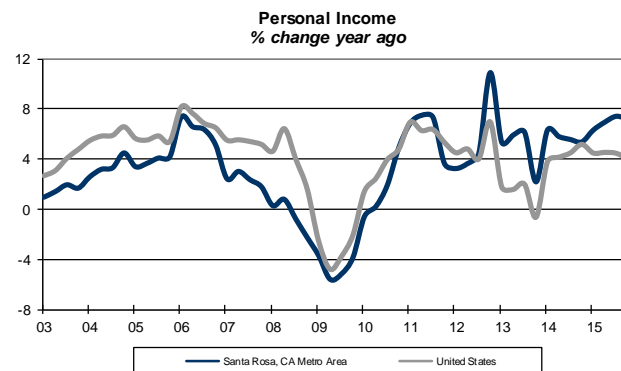
- An increasing incidence of drought is a concern for the prospects of Sonoma County's wine industry. Though last year's grape harvest was the third largest on record, a fourth consecutive year of severe dry conditions would lower the quantity, if not quality, of the grape harvest. Stricter environmental regulations will increase costs for Sonoma County's wine industries, especially smaller vineyards and wineries. Restrictions on the use of Russian River water—used to protect vineyards from springtime frosts—and regulations on the hillside cultivation of wine grapes as the amount of land available for cultivation dwindles are among the challenges the industry faces.

EMPLOYMENT DIVERSITY AND VOLATILITY					
	DIVERSITY <sup>1</sup>	VOLATILITY 2014			
	2014	TOTAL <sup>2</sup>	SYSTEMATIC <sup>3</sup>	NONSYSTEMATIC <sup>3</sup>	BETA <sup>4</sup>
SANTA ROSA, CA	0.44	189	91	9	1.72
SAN FRANCISCO- REDWOOD CITY-SOUTH SAN FRANCISCO, CA	0.51	152	86	14	1.30
OAKLAND-HAYWARD- BERKELEY, CA	0.72	141	93	7	1.32
VALLEJO-FAIRFIELD, CA	0.56	125	77	23	0.96
PORTLAND- VANCOUVER- HILLSBORO, OR-WA	0.74	142	99	1	1.40
UNITED STATES	1.00	100	100	0	1.00
MEDIAN	0.50	114	83	17	0.93
NOTES:					
1) DIVERSITY IS DEFINED AS THE EXTENT TO WHICH AN MSA'S INDUSTRIAL STRUCTURE APPROXIMATES THAT OF THE NATION. THE MORE CLOSELY THE MSA'S ECONOMY RESEMBLES THE NATIONAL ECONOMY, THE HIGHER THE VALUE. THE DIVERSITY MEASURE IS BOUNDED BETWEEN 0 AND 1. 1 MEANS THE MSA HAS THE SAME INDUSTRIAL STRUCTURE AS THE U.S., 0 MEANS IT HAS A TOTALLY DIFFERENT INDUSTRIAL STRUCTURE THAN THE U.S. DIVERSITY IS ESTIMATED USING DATA FOR 2014.					
2) TOTAL VOLATILITY IS THE STANDARD DEVIATION OF AN MSA'S EMPLOYMENT GROWTH. THIS RELATIVE DEVIATION HAS BEEN INDEXED TO THE UNITED STATES = 100. VOLATILITY IS ESTIMATED USING DATA FOR 2014.					
3) SYSTEMATIC FLUCTUATION IS THAT PORTION OF AN AREA'S ECONOMY THAT IS ASSOCIATED WITH NATIONAL ECONOMIC FLUCTUATIONS. NONSYSTEMATIC VOLATILITY IS THAT PORTION OF AN AREA'S VOLATILITY NOT ASSOCIATED WITH NATIONAL ECONOMIC FLUCTUATIONS.					
4) BETA MEASURES THE MAGNITUDE OF AN AREA'S SENSITIVITY TO NATIONAL ECONOMIC CONDITIONS. THE U.S. AVERAGE, BY DEFINITION, IS 1. A ONE PERCENTAGE POINT INCREASE IN NATIONAL EMPLOYMENT WILL CAUSE THAT PORTION OF A METRO AREA'S EMPLOYMENT BASE TO RISE BY THE PERCENTAGE VALUE OF BETA.					



## INCOME [\(back to top\)](#)

- Per capita income in Sonoma County exceeds the U.S. average and has caught up to that of California.



Sources: BEA, Moody's Analytics

- Real per capita income has fully recovered after plunging in the Great Recession and has risen faster than the U.S.

and California averages since the middle of 2013. Though the county's better-paying industries were hit hard by the recession, growth in high-end tourism, wine-making, and craft beer has bolstered income growth. High-tech research and development has made a small but positive contribution.

- The labor market is quickly tightening. Not only has the unemployment rate fallen to its long-run average, but the ratio of total employment to the working-age population, which accounts for workers that have left the labor force, is quickly approaching pre-recession levels. The long-run jobless rate will remain near 4%, a slight uptick from the March rate of 3.8%.

## BALANCE SHEETS [\(back to top\)](#)

- Consumer credit quality in Sonoma County has improved tremendously in the past three years. The personal bankruptcy rate exceeded the U.S. average as late as 2012. However, it has since fallen back below the U.S. average and has opened a sizable gap with respect to the U.S. rate, reflecting better credit conditions among Sonoma households.
- Personal Bankruptcy Filings**  
*Filings per thousand households*

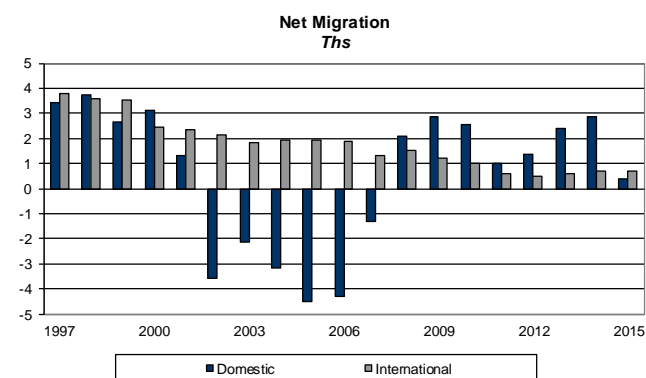
Year	Santa Rosa, CA Metro Area	United States
02	6.5	13.5
03	7.0	14.0
04	7.5	14.5
05	7.0	14.0
06	11.5	18.0
07	3.0	5.5
08	5.0	7.5
09	8.0	10.0
10	12.0	13.0
11	13.0	13.5
12	12.0	12.5
13	8.0	9.0
14	5.0	6.0
15	4.0	5.0

Sources: Administrative Office of U.S. District Courts, Moody's Analytics
- Delinquency rates across all loan categories are at or near their prerecession rates, according to credit bureau Equifax. Delinquency rates for auto, credit card, and first mortgage loans have fallen well below the state and U.S. rates. After climbing steeply in 2011 and 2012, delinquency rates for student loans have fallen back to their long-run average, in line with the trend at the national level. The rapid decline in the delinquency rate owes to the strong labor market and a modest pickup in existing-home sales. Distressed sales are no longer a drag on house prices, although with home values still a quarter below prerecession peaks, homeowners may still face reduced liquidity.
  - Although delinquency rates are much improved, households are reluctant to take on new debt. The dollar volume of total balances has recovered just half of its average prior to the housing boom, according to Equifax, and stagnant credit growth is keeping a lid on spending.

## DEMOGRAPHIC TRENDS [\(back to top\)](#)

- Population growth in Sonoma County has progressively downshifted over the past two decades and came in significantly below the U.S. average in 2015. Compared with the five lean years following the bursting of the tech bubble in 2001—a period with outright declines in 2005 and 2006—demographic trends are much improved. However, population gains over the most recent five-year period have been average at best. After rising at an average annual rate of 0.8% from 2010 to 2014, population growth clocked in at a more pedestrian 0.5% in 2015, well below the U.S. rate.

- Net migration to Sonoma County remains positive, but the recent decline in housing affordability and rise in living costs have weighed on net domestic and international migration. Net in-migration will support population gains but rise only moderately over the next few years.



- The outlook calls for population growth to hold firm at 0.65% through the remainder of this decade, slightly below the U.S. average of 0.8%. This rate of increase is consistent with long-term trends in housing affordability, which is expected to decline sharply over the next few years as house price gains outstrip income growth, and as land constraints limit new building. Despite the more modest outlook, this rate of increase is expected to provide adequate labor force additions for the expanding economy.
- However, risks do tilt to the downside. Sonoma's population is skewed toward older cohorts, with residents aged 45 to 65 accounting for an above-average share. This cohort will begin to retire and exit the labor force over the next few years, and will need to be replaced by younger workers. Should growth in the working-age population disappoint, Sonoma County could face a shortage of skilled labor.

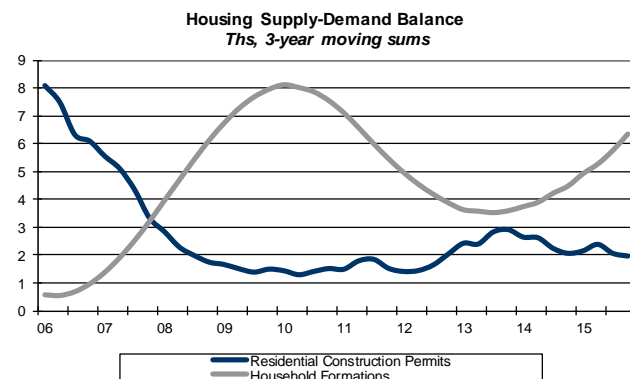
- The modest outlook for population growth will make efforts to train a new generation of workers even more important. Over the long term, population gains will increasingly depend upon immigrant households. This will begin to reshape the population. Since immigrant households are generally younger and larger, they will provide a boost to long-term labor force growth as their children age into the working-age groups. But in the meantime, the challenge will be to provide the education and training needed for the younger population to fully participate in the county's workforce and the broader economy.

<b>Population Profile</b>	<b>% of total</b>	
	<b>Population, 2014</b>	
	<b>Santa Rosa, CA Metro Area</b>	<b>US</b>
Age 5-19	17.9	19.5
Age 25-44	25.2	26.4
Age 45-64	28.6	26.2
Over age 65	16.7	14.5
Birth Rate, (# of Births per 1000)	10.2	12.4
Death Rate, (# of Deaths per 1000)	8.5	8.2
Median Age (2010 Census)	39.9	37.2
<i>Source: BOC</i>		

MIGRATION FLOWS - SANTA ROSA-PETALUMA, CA METRO AREA			
INTO SANTA ROSA-PETALUMA, CA METRO AREA	NUMBER OF MIGRANTS	FROM SANTA ROSA-PETALUMA, CA METRO AREA	NUMBER OF MIGRANTS
SAN FRANCISCO-SAN MATEO-REDWOOD CITY, CA METROPOLITAN DIVISION	2,532	SAN FRANCISCO-SAN MATEO-REDWOOD CITY, CA METROPOLITAN DIVISION	1,878
OAKLAND-FREMONT-HAYWARD, CA METROPOLITAN DIVISION	987	OAKLAND-FREMONT-HAYWARD, CA METROPOLITAN DIVISION	979
SACRAMENTO--ARDEN-ARCADE--ROSEVILLE, CA METROPOLITAN STATISTICAL AREA	695	SACRAMENTO--ARDEN-ARCADE--ROSEVILLE, CA METROPOLITAN STATISTICAL AREA	737
NAPA, CA METROPOLITAN STATISTICAL AREA	470	VALLEJO-FAIRFIELD, CA METROPOLITAN STATISTICAL AREA	531
LOS ANGELES-LONG BEACH-GLENDALE, CA METROPOLITAN DIVISION	418	NAPA, CA METROPOLITAN STATISTICAL AREA	468
SAN JOSE-SUNNYVALE-SANTA CLARA, CA METROPOLITAN STATISTICAL AREA	374	LOS ANGELES-LONG BEACH-GLENDALE, CA METROPOLITAN DIVISION	415
VALLEJO-FAIRFIELD, CA METROPOLITAN STATISTICAL AREA	338	SAN JOSE-SUNNYVALE-SANTA CLARA, CA METROPOLITAN STATISTICAL AREA	395
SAN DIEGO-CARLSBAD-SAN MARCOS, CA METROPOLITAN STATISTICAL AREA	313	SAN DIEGO-CARLSBAD-SAN MARCOS, CA METROPOLITAN STATISTICAL AREA	316
RIVERSIDE-SAN BERNARDINO-ONTARIO, CA METROPOLITAN STATISTICAL AREA	223	RIVERSIDE-SAN BERNARDINO-ONTARIO, CA METROPOLITAN STATISTICAL AREA	209
SANTA ANA-ANAHEIM-IRVINE, CA METROPOLITAN DIVISION	213	PORTLAND-VANCOUVER-HILLSBORO, OR-WA METROPOLITAN STATISTICAL AREA	186
INMIGRATION	12,934	OUTMIGRATION	12,424
		NET MIGRATION	510
NOTE:			
NET MIGRATION: NUMBER OF MIGRANTS IS THE NET FLOW OF MIGRANTS.			
SOURCE: MOODY'S ANALYTICS CALCULATION FROM 2011 IRS DATA			

## RESIDENTIAL REAL ESTATE [\(back to top\)](#)

- Despite rapid house price appreciation, Sonoma County's housing market is struggling to maintain balance. House prices have recovered more than three-quarters of the value lost in the recession, according to the Federal Housing Finance Authority



Sources: BOC, Moody's Analytics

and Case-Shiller indexes, and are rising at more than twice the national rate. However, sales of existing single-family homes were approximately flat over the past two years and remain well below the trend prior to the housing boom. Flagging sales of existing single-family homes are keeping homebuilders on the sidelines, preventing a stronger recovery in residential construction from taking hold.

- The pace of single-family construction has not meaningfully accelerated since hitting bottom in late 2009, in contrast to steady improvement at the state and national level. Despite robust private sector job gains in Sonoma County, slower wage growth and historically high rents have hurt households' ability to save for a down payment, tempering home purchases by first time and returning buyers.
- Stronger income growth and sturdier household balance sheets will pave the way for a modest rebound in homebuilding by the end of this year. Foreclosed properties, as a percentage of total households, have fallen to their lowest level since RealtyTrac started keeping records in 2007, while CoreLogic records indicate that distress sales have fallen to 10% of total sales after averaging in excess of 40% from 2008 to 2011. Nor are foreclosures likely to resume any time soon; Equifax reports that first mortgages in Sonoma County that are in delinquency or some stage of foreclosure have fallen to 2% of all first mortgages, down from a peak of more than 11% in 2010, and Moody's Analytics expects this downward trend to persist.

- There is substantial demand for new housing in Sonoma County in the near term, provided that income and credit growth are there to sustain it. At three months of sales, the housing inventory is just half of what is considered to be a balanced market, while the pace of single-family completions is badly lagging household formation, pointing to excess demand.
- Longer term, the outlook for residential construction is relatively bright, but return to the 2005 boom in single-family construction is not likely. Low affordability will temper in migration and will hurt younger residents' ability to purchase homes within the county. Furthermore, millennials will soon account for the largest share of first-time homebuyers, and greater student debt burdens and a tendency to postpone household formation will apply further restraint. Single-family construction will thus proceed at a more moderate pace as new homebuyers gradually step into the market.

## COMMERCIAL REAL ESTATE [\(back to top\)](#)

- The market for commercial real estate tightened considerably in 2015 and early 2016, and will make a stronger contribution to the recovery in construction over the next year. Strong growth in food manufacturing, retail and office-using industries has increased net absorption and pushed vacancy rates to their lowest levels in more than a decade, according to Keegan & Coppin Co.
- Robust growth in food and beverage manufacturing is driving improvement in the market for industrial space. The industrial vacancy rate has fallen from 16% in 2012 to 5.6% in the first quarter of 2016. As consumer confidence firms and disposable incomes rise at the national level, sales of specialty food products and beverages will gather steam, boosting demand for industrial space. Sonoma's medical device manufacturers will make a small but positive contribution to demand for new industrial space.
- Demand for new office space is improving, but the balance of the market still tilts toward oversupply. The swift expansion of Sonoma's healthcare industry has helped offset the departure of several large office-using employers in recent years. As a result, the office vacancy rate has fallen 3 percentage points to 15.6% as of the first quarter.
- Retail space remains the best-performing sector of Sonoma County's commercial real estate market, and intensifying competition for retail space is already prompting new construction. The vacancy rate has fallen 1 percentage point to 3.8% even as developers add to supply, and the rebounding economy will spur demand for retail space.
- The issuance of permits for new commercial construction is picking up steam after rising at a steady pace since mid-2012. The issuance of permits for alterations is also on the upswing as companies acquire available space and take advantage of low interest rates and relatively low construction costs.



## FORECAST RISKS [\(back to top\)](#)

- Given the cautious outlook for the global economy and the potential for a range of economic headwinds to stall growth domestically, the balance of risks for Sonoma County's economy tilts to the downside. Chief among them is a retrenchment in consumer confidence. The economy is near full employment and wage growth is finally picking up. However, any blow to consumers' psyches—whether from volatility in financial markets, from political instability overseas, or from uncertainty in domestic politics—could prevent consumers from spending the windfall. A large fallback in consumer confidence would darken the near-term outlook for Sonoma County's tourism and wine-making industries and would also drag on spending by Sonoma County residents locally.
- The second major risk stems from overseas markets. A larger than expected slowdown in China and emerging markets would hurt demand for Sonoma's wine-making, tourism and technology-producing industries. The baseline outlook assumes that a rise in domestic tourist visits will more than make up for any fallback in international tourism. However, a prolonged slowdown in other economies would curtail demand for travel and wines as well as for Sonoma County-produced medical devices and electronic testing equipment.
- The outlook for Sonoma County's economy depends in part on a strong recovery in homebuilding, which has a strong multiplier effect across many local industries. If residential construction does not accelerate as expected, the economy would see not only weaker construction employment, but also less hiring in finance and service-producing industries.
- Finally, while the share of Sonoma County's workforce aged 25 to 44 is in line with the national average, a failure to provide young workers with the training necessary to succeed in the county's leading industries presents a downside risk to long-term growth. Employers could face a potential shortage of workers in coming years as a result of the looming retirement of the baby boomer cohort. Thus, education and workforce training become an increasingly rising priority. The population share of the 15 to 35 age cohort is at a peak, and it will be imperative to provide high school and

college graduates with training, internships, and the mentoring necessary to succeed in Sonoma County's growth industries. Without this support, the county would struggle to retain its highly skilled workforce, a considerable factor in its long-term growth.

- On the upside, a longer than expected period of low energy prices would create upside potential for Sonoma's tourism, increasing traffic at local wineries, craft breweries, hotels and restaurants.
- As disposable incomes rise and visitors plan longer stays, there is potential to integrate the creative arts into the broader tourist experience. In particular, local art galleries and performing arts companies could benefit as visitors seek additional options for leisure and entertainment.
- Rising tourist traffic coupled with the rise in disposable incomes nationally will also create upside potential for the county's specialty food makers. If partnerships with wineries, restaurants and artisanal grocers come to fruition, the recognition of the county as an international hub for local and organic foods could stimulate manufacturing jobs and greater subsequent demand for travel, wine and recreational services.

## MAJOR EMPLOYERS [\(back to top\)](#)

Major Employers: Santa Rosa, CA Metropolitan Statistical Area

Rank	Employer	Industry	Employee
1	Kaiser Permanente	Education or Health Service	2,640
2	Graton Resort & Casino	Leisure and Hospitality	2,000
3	St. Joseph Health System	Education or Health Service	1,578
4	Keysight Technologies	Manufacturing	1,300
5	Safeway Inc.	Retail Trade	1,200
6	Sutter Santa Rosa Regional Hospital	Education or Health Service	936
7	Amy's Kitchen	Manufacturing	870
8	Medtronic CardioVascular	Manufacturing	840
9	Jackson Family Wine	Retail Trade	800
10	Cyan	Information	700
11	Wal-Mart Stores Inc.	Retail Trade	650
12	Hansel Auto Group	Retail Trade	605
13	AT&T	Information	600
14	Lucky	Retail Trade	550
15	River Rock Casino	Leisure and Hospitality	500
16	Pacific Gas and Electric Co.	Trans./Warehouse/Utilities	500
17	Petaluma Acquisitions	Manufacturing	455
18	Ghilotti Construction Co.	Construction	425
19	Exchange Bank	Financial Activities	400
20	The Home Depot U.S.A. Inc.	Retail Trade	390
21	Redwood Credit Union	Financial Activities	382
22	Sonoma Media Investments	Information	335
23	G&G Supermarket	Retail Trade	300
24	Mary's Pizza Shack	Leisure and Hospitality	300

Sources: North Bay Business Journal: Book of Lists, February 2015  
 North Bay Business Journal: Book of Lists, February 2014  
 North Bay Business Journal: Book of Lists, January 2013  
 North Bay Business Journal: Book of Lists, January 2012

## DEMOGRAPHIC PROFILE [\(back to top\)](#)

Indicator	Units	Santa Rosa, CA Metropolitan Statistical Area	U.S.	Rank	Year
<b>Households</b>					
Households, % change (2009-2014)	Ann. % change	0.9	0.8	173	2014
Population w/ B.A. degree or higher	% of adult population	34.9	30.1	69	2014
Median household income	\$	67,771	53,657	34	2014
% change year ago		6.2	2.7	20	2014
<b>Population</b>					
Per capita income	\$	49,185	46,049	60	2014
% change year ago		4.7	3.6	33	2014
Population	thousands	502	321,419	123	2015
% change year ago		0.5	0.8	214	2015
White	%	87.5	77.4	159	2014
Black or African American	%	1.9	13.2	341	2014
Hispanic	%	26.1	17.4	58	2014
Asian	%	4.3	5.4	83	2014
Net domestic migration, rate	Persons/thrs. pop.	0.8	0.0	157	2015
International migration, rate	Persons/thrs. pop.	1.4	3.6	264	2015
Poverty rate	%	11.3	15.5	55	2014
Median age	years	40.5	37.4	309	2014
<b>Household Cost Indexes</b>					
Housing affordability index		90.6	166.1	385	2015
Median existing home price	\$ ths	540.8	221.4	12	2015
% change year ago		10.3	6.9	28	2015
Cost of living	Index: U.S.=100	123.88	100	385	2013

**Table 1: Sonoma County Clusters**

Industries within clusters are listed by their North American Industry Classification System codes

## Composition of Economic Clusters

## 1) Agriculture, Food and Wine

111,112	Farming
311	Food manufacturing
3121	Beverage manufacturing

## 2) Technology-Producing Industries

3254	Pharmaceutical and Medicine Manufacturing
3341	Computer and Peripheral Equipment Manufacturing
3342	Communications Equipment Manufacturing
3344	Semiconductor and Other Electronic Component Manufacturing
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
3391	Medical Equipment and Supplies Manufacturing
5112	Software Publishers
5171	Wired Telecommunications Carriers
5172	Wireless Telecommunications Carriers (except Satellite)
5174	Satellite Telecommunications
5179	Other Telecommunications
5191	Other Information Services
5182	Data Processing, Hosting, and Related Services
5415	Computer Systems Design and Related Services
5417	Scientific Research and Development Services
5419	Other Professional, Scientific, and Technical Services
6215	Medical and Diagnostic Laboratories

## 3) Wealth Management

5211	Monetary authorities - central bank
5222	Nondepository Credit Intermediation
5223	Activities Related to Credit Intermediation
5231	Securities and Commodity Contracts Intermediation and Brokerage
5232	Securities and Commodity Exchanges
5239	Other Financial Investment Activities
5251	Insurance and Employee Benefit Funds
5312	Offices of Real Estate Agents and Brokers

## 4) Tourism

4811	Scheduled air transportation
4812	Nonscheduled air transportation
4851	Urban Transit Systems
4853	Taxi and limousine services
4855	Charter bus industry
4881	Support activities for air transportation
4884	Support Activities for Road Transportation
7112	Spectator Sports
7121	Museums, Historical Sites, and Similar Institutions
7131	Amusement Parks and Arcades
7132	Gambling Industries
7139	Other Amusement and Recreation Industries
7211	Traveler accommodation
7212	RV (Recreational Vehicle) Parks and Recreational Camps
7213	Rooming and Boarding Houses
722	Food services and drinking places

**Table 1 Continued: Sonoma County Clusters**

## 5) Health and Wellness

621	Ambulatory health care services
622	Hospitals
623	Nursing and residential facilities
8121	Personal Care Services

## 6) Creative Professional Services

5111	Newspaper, periodical, book and directory publishers
5151	Radio and television broadcasting
5152	Cable and other subscription programming
	Advertising, public relations and related services
5418	
5112	Software publishing
	Computer systems design and related services
5415	
5417	Scientific research and development services
5416	Management, scientific and technical consulting services
5419	Other professional, scientific and technical services
	Architectural, engineering and related services
5413	
5414	Specialized design services
7111	Performing arts companies
7113	Promoters of performing arts, sports and similar events
7114	Agents and managers for artists, athletes, entertainers, and other public figures
7115	Independent artists, writers and performers
512	Motion picture and sound recording

## 7) Construction and Green Services

23	Construction
327	Non-metallic minerals (clay, cement, concrete products)
5617	Services to buildings and dwellings
5621	Waste collection
5629	Remediation and Other Waste Management Services
2211	Electric Power Generation, Transmission and Distribution

## 8) Retail Trade

RT	Retail Trade
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## 9) Wholesale Trade

42	Wholesale Trade
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Table 2: Sonoma County Historical Summary Indicators								
								Annual Growth
	2010	2011	2012	2013	2014	2015		10-15
	Economy							
Gross Metro Product (Bil 2009\$)	21.8	22.3	22.3	22.7	23.3	24.0		2.0
% Annual Change	1.3	2.4	-0.2	2.0	2.6	3.0		
Gross Metro Product (Bil \$)	22.0	23.0	23.5	24.5	25.7	26.7		4.0
% Annual Change	2.3	4.4	2.2	4.3	4.9	4.2		
Non-farm Employment (Ths)	167.5	169.5	172.5	181.0	191.2	197.1		3.3
% Annual Change	-2.0	1.2	1.8	4.9	5.6	3.1		
	Components of Employment							
Mining and Natural Resources	0.2	0.2	0.2	0.2	0.3	0.2		0.1
Construction	8.9	8.6	8.7	9.9	10.5	11.5		5.4
Manufacturing	19.9	20.2	19.7	20.1	20.7	21.8		1.8
Trade, Transportation, and Utilities	32.0	32.4	33.6	35.1	36.1	36.3		2.6
Wholesale Trade	6.6	6.6	6.9	7.4	7.5	7.5		2.5
Retail Trade	21.5	22.0	22.7	23.7	24.3	24.6		2.7
Transportation and Utilities	3.9	3.8	3.9	4.1	4.3	4.3		1.9
Information	2.5	2.5	2.6	2.6	2.7	2.7		1.8
Financial Activities	7.7	7.6	7.4	7.4	7.7	8.0		0.9
Professional and Business Services	18.8	18.1	18.2	19.3	20.1	20.8		2.0
Education and Health Services	24.8	25.0	26.2	28.0	31.3	32.3		5.4
Leisure and Hospitality	20.1	20.5	21.8	22.8	23.9	24.7		4.2
Other Services	5.9	6.1	6.3	6.6	6.8	7.0		3.5
Government	26.8	28.4	28.0	28.9	31.3	31.8		3.5
Labor Force (Ths)	247.0	248.2	248.8	252.2	257.1	259.3		1.0
% Annual Change	-3.7	0.5	0.2	1.4	2.0	0.8		
Number of Employed (Ths)	220.9	223.5	227.4	235.1	242.7	247.9		2.3
Number of Unemployed (Ths)	26.2	24.7	21.4	17.1	14.4	11.4		-15.4
								<b>Average</b>
Unemployment Rate (%)	10.6	9.9	8.6	6.8	5.6	4.4		7.7

Table 2 Continued: Sonoma County Historical Summary Indicators							
	Income, Demographics, and Consumption						Annual Growth
	2010	2011	2012	2013	2014	2015	10-15
Personal Income (Mil \$)	19,781.4	21,026.7	22,194.5	23,269.7	24,606.7	26,319.6	5.9
% Annual Change	1.6	6.3	5.6	4.8	5.7	7.0	
Real Personal Income (Mil 2000\$)	19,459.0	20,189.4	20,912.0	21,630.7	22,552.5	24,048.0	4.3
Per Capita Income (\$)	40,771.7	43,076.8	45,175.0	46,945.1	49,206.2	52,334.1	5.1
Median Household Income (\$)	61,442.3	60,411.8	60,878.0	63,809.5	67,771.0	70,668.4	2.8
Personal Bankruptcy Filings	2,490.0	2,296.0	1,776.0	1,258.0	930.0	688.0	-22.7
Consumer Price Index	232.7	236.8	241.9	243.8	247.8	249.7	1.4
Population (Ths)	484.8	487.8	490.7	495.0	499.7	502.1	0.7
% Annual Change	1.1	0.6	0.6	0.9	0.9	0.5	
Age < 4	28.1	27.8	26.9	26.7	26.5	26.5	-1.2
Age 5-19	92.0	90.9	90.3	89.7	89.2	88.2	-0.8
Age 20-24	32.3	32.7	33.1	32.9	32.2	31.7	-0.4
Age 25-44	122.1	122.3	122.9	124.1	125.8	126.5	0.7
Age 45-64	142.4	143.8	142.7	142.6	142.8	143.3	0.1
Age > 65	68.0	70.3	74.9	79.1	83.3	86.1	4.8
Households (Ths)	186.5	188.1	188.8	190.1	191.8	193.7	0.8
% Annual Change	1.5	0.8	0.4	0.7	0.9	1.0	
Net Migration (Ths)	3.6	1.6	1.8	3.0	3.6	1.1	
							<b>Average</b>
Total Housing Permits	477	632	560	1,046	663	652	672
% Annual Change	7.9	32.5	-11.4	86.8	-36.6	-1.6	
Single Family Permits	287	449	312	453	419	437	393
Multi Family Permits	190	183	248	593	244	216	279
Median Exist. Home Price (SA, Ths \$)	362.2	332.7	356.0	438.0	490.2	540.8	420
% Annual Change	3.9	-8.2	7.0	23.1	11.9	10.3	8.0
Existing Home Sales (Ths)	6.4	8.2	7.4	8.1	7.9	8.8	6.8
Mortgage Originations (Mil \$)	5.0	4.1	6.0	5.8	3.6	4.5	-2.1
							<b>Average</b>
Affordability Index	104.3	116.0	119.8	96.2	90.5	90.6	103
Nonres. Building Permits (Mil \$)							
Total	90.0	94.2	109.3	103.2	126.4	143.6	9.8
Office Buildings	0.0	0.0	33.2	3.6	4.8	1.1	537.4
Retail Space	1.5	1.9	5.6	41.5	20.3	31.5	84.3
Industrial	0.0	0.0	0.1	0.0	0.0	2.5	656.9



Table 3: Sonoma County Forecasted Summary Indicators							
							Annual Growth
	2016	2017	2018	2019	2020	2021	16-21
	Economy						
Gross Metro Product (Bil 2009\$)	24.9	25.8	26.6	27.2	27.8	28.5	2.7
% Annual Change	3.8	3.5	3.2	2.3	2.1	2.4	
Gross Metro Product (Bil \$)	28.1	29.7	31.4	32.9	34.3	35.8	4.9
% Annual Change	5.1	5.6	5.7	4.7	4.2	4.4	
Non-farm Employment (Ths)	201.5	204.0	206.7	208.8	209.9	211.1	0.9
% Annual Change	2.3	1.2	1.3	1.0	0.6	0.5	
	Components of Employment						
Mining and Natural Resources	0.2	0.2	0.2	0.2	0.2	0.2	-4.8
Construction	11.5	11.8	12.1	12.2	12.3	12.4	1.6
Manufacturing	22.0	22.0	22.0	22.0	21.8	21.5	-0.4
Trade, Transportation, and Utilities	36.6	36.5	36.5	36.6	36.6	36.6	0.0
Wholesale Trade	7.5	7.5	7.5	7.6	7.6	7.6	0.3
Retail Trade	24.8	24.6	24.4	24.4	24.4	24.4	-0.3
Transportation and Utilities	4.4	4.5	4.6	4.6	4.6	4.6	1.1
Information	2.7	2.7	2.6	2.6	2.6	2.6	-0.3
Financial Activities	8.2	8.3	8.5	8.6	8.6	8.7	1.3
Professional and Business Services	22.1	23.3	24.3	25.0	25.2	25.5	2.9
Education and Health Services	33.1	33.5	34.2	35.0	35.5	35.9	1.7
Leisure and Hospitality	26.4	27.3	28.0	28.5	28.9	29.1	2.0
Other Services	7.2	7.4	7.5	7.5	7.6	7.6	0.9
Government	31.6	31.0	30.7	30.6	30.7	30.8	-0.5
Labor Force (Ths)	264.5	266.5	267.5	269.2	271.3	273.2	0.7
% Annual Change	2.0	0.8	0.4	0.6	0.8	0.7	
Number of Employed (Ths)	254.6	257.3	258.2	259.2	260.4	261.9	0.6
Number of Unemployed (Ths)	9.8	9.2	9.3	10.0	10.9	11.3	2.9
							Average
Unemployment Rate (%)	3.7	3.5	3.5	3.7	4.0	4.1	3.8

Table 3 Continued: Sonoma County Forecasted Summary Indicators								
	Income, Demographics, and Consumption							Annual Growth
	2016	2017	2018	2019	2020	2021		16-21
Personal Income (Mil \$)	27,826.4	29,625.2	31,342.6	32,725.3	34,085.3	35,566.9		5.0
% Annual Change	5.7	6.5	5.8	4.4	4.2	4.3		
Real Personal Income (Mil 2000\$)	25,049.0	25,923.9	26,670.8	27,143.0	27,691.8	28,345.5		2.5
Per Capita Income (\$)	54,834.6	57,798.8	60,543.3	62,591.1	64,557.0	66,715.9		4.0
Median Household Income (\$)	72,924.5	75,800.6	78,710.7	81,023.2	83,171.5	85,499.3		3.2
Personal Bankruptcy Filings	762.3	854.5	1,003.1	1,154.2	1,286.3	1,380.4		12.6
Consumer Price Index	253.9	260.6	268.5	276.2	283.5	290.9		2.8
Population (Ths)	506.8	511.9	517.0	522.2	527.3	532.5		1.0
% Annual Change	0.9	1.0	1.0	1.0	1.0	1.0		
Age < 4	26.6	26.7	26.9	27.0	27.1	27.1		0.4
Age 5-19	87.9	87.9	88.0	88.3	88.5	88.9		0.2
Age 20-24	31.0	30.3	29.6	28.9	28.4	28.1		-1.9
Age 25-44	128.2	130.4	132.6	134.9	136.9	138.9		1.6
Age 45-64	144.1	144.5	144.6	144.3	144.0	143.5		-0.1
Age > 65	89.0	92.1	95.4	98.8	102.4	105.9		3.5
Households (Ths)	197.1	200.6	203.4	205.8	208.1	210.0		1.3
% Annual Change	1.7	1.8	1.4	1.2	1.1	0.9		
Net Migration (Ths)	3.6	4.0	4.0	4.0	4.0	3.9		
	Residential Housing Market							Average
Total Housing Permits	930	1,451	1,589	1,485	1,473	1,519		1,408
% Annual Change	42.6	56.1	9.5	-6.5	-0.8	3.1		
Single Family Permits	834	1,140	1,245	1,175	1,161	1,202		1,126
Multi Family Permits	96	311	343	309	312	316		281
Median Exist. Home Price (SA, Ths \$)	575	599	618	645	683	728		641.4
% Annual Change	6.3	4.3	3.1	4.4	5.9	6.6		5.1
Existing Home Sales (Ths)	9.8	10.7	10.0	9.1	8.8	8.9		-2.0
Mortgage Originations (Mil \$)	4.9	3.0	2.4	2.5	2.7	3.2		-8.2
								Average
Affordability Index	86.7	78.0	73.7	72.0	70.3	67.7		74.7
Nonres. Building Permits (Mil \$)	Nonresidential Construction							Average
Total	104.3	108.1	113.6	118.5	121.7	125.0		115.2
Office Buildings	2.5	2.9	3.2	3.4	3.6	3.8		3.2
Retail Space	29.9	31.0	32.4	33.9	35.0	36.1		33.0
Industrial	0.7	0.6	0.6	0.6	0.5	0.5		0.6

Table 4: Sonoma County Historical Employment by Cluster								
<i>Thousands</i>							Compound Ann.	Pct. Share of
							Growth Rate	Employ- ment
	2010	2011	2012	2013	2014	2015	10-15	2015
Total	177.1	179.1	182.3	191.1	201.5	207.6	3.2	100.0
% Change	-1.9	1.2	1.8	4.8	5.4	3.1		
1. Agriculture, Food and Wine	15.6	15.4	15.5	16.0	16.9	17.9	2.8	8.6
% Change	1.7	-1.1	0.8	3.0	5.5	6.0		
2. Technology-Producing Industries	8.2	8.5	8.0	8.5	8.4	8.6	1.0	4.2
% Change	-5.0	3.3	-5.2	5.1	-0.3	2.4		
3. Wealth Management	1.8	1.8	1.8	1.9	1.9	2.0	2.2	0.9
% Change	-6.4	0.7	0.0	7.1	1.7	1.6		
4. Tourism	20.4	20.8	22.2	23.3	24.3	25.0	4.1	12.1
% Change	-0.2	1.9	6.6	5.0	4.3	3.0		
5. Health and Wellness	18.1	18.4	19.3	20.0	21.0	21.8	3.8	10.5
% Change	1.0	1.9	4.8	3.7	4.9	3.9		
6. Creative Professional Services	9.2	8.5	8.1	8.2	8.6	9.0	-0.6	4.3
% Change	-0.7	-8.4	-4.3	1.9	3.9	4.8		
7. Construction and Green Services	12.8	12.5	12.9	14.5	15.1	16.4	5.1	7.9
% Change	-7.7	-2.2	2.8	12.3	4.5	8.6		
8. Retail Trade	21.5	22.0	22.7	23.7	24.3	24.6	2.7	11.9
% Change	0.1	2.2	3.2	4.3	2.8	1.1		
9. Wholesale Trade	6.6	6.6	6.9	7.4	7.5	7.5	2.5	3.6
% Change	-2.8	0.4	5.0	6.1	1.7	-0.4		
Sum of Clusters	114.2	114.5	117.4	123.4	128.0	132.8	3.1	64.0
% Change	-1.3	0.3	2.6	5.1	3.8	3.7		
Other	62.9	64.7	64.9	67.7	73.4	74.9	3.6	36.0
% Change	-3.1	2.9	0.4	4.3	8.5	1.9		

Table 5: Sonoma County Forecasted Employment by Cluster								
<i>Thousands</i>							Compound Ann.	Pct. Share of
							Growth Rate	Employ- ment
	2016	2017	2018	2019	2020	2021	16-21	2021
Total	212.1	214.6	217.3	219.4	220.6	221.8	0.9	100.0
% Change	2.1	1.2	1.3	1.0	0.5	0.5		
1. Agriculture, Food and Wine	18.1	17.9	17.8	17.8	17.8	17.8	-0.3	8.0
% Change	1.0	-1.2	-0.3	0.1	0.0	-0.2		
2. Technology-Producing In- dustries	8.9	9.1	9.4	9.5	9.5	9.6	1.5	4.3
% Change	2.5	3.3	2.4	1.4	0.4	0.2		
3. Wealth Management	1.9	2.0	2.0	2.0	2.0	2.0	0.5	0.9
% Change	-0.9	0.9	0.9	0.4	-0.1	0.3		
4. Tourism	26.6	27.5	28.2	28.7	29.0	29.3	2.0	13.2
% Change	6.1	3.4	2.6	1.9	1.1	0.9		
5. Health and Wellness	22.2	22.5	22.9	23.3	23.6	23.9	1.5	10.8
% Change	1.8	1.3	1.9	1.9	1.3	1.1		
6. Creative Professional Ser- vices	9.3	9.7	10.0	10.1	10.2	10.2	1.9	4.6
% Change	4.0	3.8	2.8	1.6	0.6	0.5		
7. Construction and Green Services	16.9	17.6	18.2	18.6	18.8	19.0	2.4	8.6
% Change	2.9	4.1	3.8	1.8	1.1	1.4		
8. Retail Trade	24.9	24.6	24.5	24.5	24.5	24.5	-0.3	11.0
% Change	1.0	-1.0	-0.5	0.0	0.0	0.0		
9. Wholesale Trade	7.5	7.5	7.5	7.6	7.6	7.6	0.3	3.4
% Change	0.4	-0.1	0.7	0.7	0.2	0.1		
Sum of Clusters	136.2	138.3	140.5	142.1	143.1	143.9	1.1	64.9
% Change	2.6	1.5	1.6	1.2	0.7	0.6		
Other	75.9	76.3	76.9	77.3	77.6	77.9	0.5	35.1
% Change	1.4	0.6	0.7	0.6	0.3	0.4		

Table 6: Sonoma County Historical Gross Regional Product (Output) by Cluster								
Millions of current dollars							Compound Ann.	Pct. Share of
							Growth Rate	Total Output
	2010	2011	2012	2013	2014	2015	10-15	2015
Total	22,002.4	22,962.7	23,474.5	24,482.7	25,677.8	26,746.7	4.0	100.0
% Change	2.3	4.4	2.2	4.3	4.9	4.2		
1. Agriculture, Food and Wine	1,777.0	1,774.3	1,882.4	1,947.0	1,983.8	2,087.2	3.3	7.8
% Change	-2.7	-0.1	6.1	3.4	1.9	5.2		
2. Technology-Producing Industries	1,806.8	1,899.5	1,970.9	2,095.1	2,218.3	2,378.3	5.6	8.9
% Change	-0.5	5.1	3.8	6.3	5.9	7.2		
3. Wealth Management	1,120.1	1,198.3	1,273.2	1,333.1	1,421.6	1,519.0	6.3	5.7
% Change	2.1	7.0	6.3	4.7	6.6	6.8		
4. Tourism	975.1	1,046.5	1,105.8	1,175.7	1,242.2	1,336.8	6.5	5.0
% Change	4.2	7.3	5.7	6.3	5.7	7.6		
5. Health and Wellness	1,607.6	1,690.6	1,750.2	1,801.5	1,816.5	1,837.3	2.7	6.9
% Change	5.4	5.2	3.5	2.9	0.8	1.1		
6. Creative Professional Services	1,848.6	1,755.8	1,778.9	1,774.8	1,915.8	2,053.8	2.1	7.7
% Change	7.4	-5.0	1.3	-0.2	7.9	7.2		
7. Construction and Green Services	1,353.6	1,332.2	1,357.4	1,534.9	1,586.9	1,758.5	5.4	6.6
% Change	-6.4	-1.6	1.9	13.1	3.4	10.8		
8. Retail Trade	1,631.7	1,668.5	1,775.8	1,900.9	1,942.2	1,950.0	3.6	7.3
% Change	4.3	2.3	6.4	7.0	2.2	0.4		
9. Wholesale Trade	1,178.2	1,294.5	1,350.9	1,458.6	1,577.2	1,639.3	6.8	6.1
% Change	6.1	9.9	4.4	8.0	8.1	3.9		
Sum of Clusters	13,298.9	13,660.3	14,245.5	15,021.6	15,704.6	16,560.2	4.5	61.9
% Change	2.0	2.7	4.3	5.4	4.5	5.4		
Other	8,703.5	9,302.4	9,228.9	9,461.0	9,973.2	10,186.6	3.2	38.1
% Change	2.8	6.9	-0.8	2.5	5.4	2.1		

**Table 7: Sonoma County Forecasted Gross Regional Product (Output) by Cluster**

<i>Millions of current dollars</i>							Compound Ann. Growth Rate	Pct. Share of Total Output
	2016	2017	2018	2019	2020	2021	16-21	2021
Total	28,122.0	29,707.6	31,393.2	32,883.6	34,278.9	35,802.8	4.9	100.0
% Change	5.1	5.6	5.7	4.7	4.2	4.4		
1. Agriculture, Food and Wine	2,244.0	2,361.6	2,489.5	2,643.4	2,795.2	2,947.7	5.6	8.2
% Change	7.5	5.2	5.4	6.2	5.7	5.5		
2. Technology-Producing Industries	2,523.6	2,736.8	2,972.0	3,185.9	3,382.6	3,597.4	7.3	10.0
% Change	6.1	8.4	8.6	7.2	6.2	6.3		
3. Wealth Management	1,590.0	1,640.1	1,695.6	1,738.9	1,774.0	1,810.5	2.6	5.1
% Change	4.7	3.2	3.4	2.6	2.0	2.1		
4. Tourism	1,426.0	1,533.0	1,634.2	1,714.9	1,784.9	1,860.0	5.5	5.2
% Change	6.7	7.5	6.6	4.9	4.1	4.2		
5. Health and Wellness	1,878.8	1,949.5	2,031.7	2,116.8	2,204.1	2,296.1	4.1	6.4
% Change	2.3	3.8	4.2	4.2	4.1	4.2		
6. Creative Professional Services	2,160.0	2,335.5	2,514.6	2,661.7	2,791.2	2,928.5	6.3	8.2
% Change	5.2	8.1	7.7	5.9	4.9	4.9		
7. Construction and Green Services	1,820.9	1,963.2	2,099.6	2,179.0	2,253.1	2,347.1	5.2	6.6
% Change	3.6	7.8	6.9	3.8	3.4	4.2		
8. Retail Trade	2,018.6	2,093.2	2,180.6	2,270.7	2,371.8	2,485.2	4.2	6.9
% Change	3.5	3.7	4.2	4.1	4.5	4.8		
9. Wholesale Trade	1,661.5	1,766.2	1,899.2	2,016.0	2,122.2	2,245.8	6.2	6.3
% Change	1.4	6.3	7.5	6.1	5.3	5.8		
Sum of Clusters	17,323.4	18,379.1	19,517.0	20,527.4	21,479.1	22,518.4	5.4	62.9
% Change	4.6	6.1	6.2	5.2	4.6	4.8		
Other	10,798.6	11,328.5	11,876.2	12,356.1	12,799.8	13,284.4	4.2	37.1
% Change	6.0	4.9	4.8	4.0	3.6	3.8		

Table 8: Sonoma County Historical Gross Regional Product (Output) by Cluster								
<i>Millions of 2009 dollars</i>							Compound Ann. Growth Rate	Pct. Share of Total Output
	2010	2011	2012	2013	2014	2015	10-15	2015
Total	21,776.4	22,301.6	22,260.6	22,699.4	23,297.2	24,003.4	2.0	100.0
% Change	1.3	2.4	(0.2)	2.0	2.6	3.0		
1. Agriculture, Food and Wine	1,730.2	1,622.4	1,631.0	1,624.7	1,626.1	1,731.7	0.0	7.2
% Change	(5.3)	(6.2)	0.5	(0.4)	0.1	6.5		
2. Technology-Producing Industries	1,830.0	1,945.9	2,007.3	2,112.3	2,204.2	2,347.0	5.1	9.8
% Change	0.8	6.3	3.2	5.2	4.4	6.5		
3. Wealth Management	1,111.3	1,175.1	1,210.3	1,223.8	1,280.6	1,302.9	3.2	5.4
% Change	1.3	5.7	3.0	1.1	4.6	1.7		
4. Tourism	974.8	1,044.6	1,062.5	1,098.1	1,129.3	1,170.1	3.7	4.9
% Change	4.2	7.2	1.7	3.3	2.8	3.6		
5. Health and Wellness	1,572.2	1,636.2	1,665.4	1,701.2	1,700.9	1,696.9	1.5	7.1
% Change	3.1	4.1	1.8	2.1	(0.0)	(0.2)		
6. Creative Professional Services	1,845.3	1,746.4	1,752.0	1,730.0	1,840.0	1,966.0	1.3	8.2
% Change	7.2	(5.4)	0.3	(1.3)	6.4	6.8		
7. Construction and Green Services	1,377.8	1,342.8	1,339.5	1,465.7	1,429.8	1,532.4	2.1	6.4
% Change	(4.7)	(2.5)	(0.2)	9.4	(2.4)	7.2		
8. Retail Trade	1,618.4	1,607.3	1,646.4	1,749.9	1,761.1	1,768.3	1.8	7.4
% Change	3.4	(0.7)	2.4	6.3	0.6	0.4		
9. Wholesale Trade	1,150.9	1,236.6	1,251.4	1,338.3	1,434.3	1,479.0	5.1	6.2
% Change	3.7	7.4	1.2	7.0	7.2	3.1		
Sum of Clusters	13,211.1	13,357.4	13,565.7	14,043.9	14,406.3	14,994.2	2.6	62.5
% Change	1.3	1.1	1.6	3.5	2.6	4.1		
Other	8,565.3	8,944.2	8,694.9	8,655.5	8,890.9	9,009.1	1.0	37.5
% Change	1.2	4.4	(2.8)	(0.5)	2.7	1.3		

Table 9: Sonoma County Forecasted Gross Regional Product (Output) by Cluster								
Millions of 2009 dollars							Compound Ann.	Pct. Share of
							Growth Rate	Total Output
	2016	2017	2018	2019	2020	2021	15-21	2021
Total	24,904.6	25,786.0	26,610.5	27,215.4	27,789.8	28,467.8	2.7	100.0
% Change	3.8	3.5	3.2	2.3	2.1	2.4		
1. Agriculture, Food and Wine	1,851.0	1,905.5	1,958.0	2,026.2	2,095.5	2,164.1	3.2	7.6
% Change	6.9	2.9	2.8	3.5	3.4	3.3		
2. Technology-Producing Industries	2,454.0	2,605.2	2,759.8	2,886.5	3,000.7	3,128.5	5.0	11.0
% Change	4.6	6.2	5.9	4.6	4.0	4.3		
3. Wealth Management	1,345.0	1,359.6	1,372.2	1,373.7	1,372.5	1,373.5	0.4	4.8
% Change	3.2	1.1	0.9	0.1	(0.1)	0.1		
4. Tourism	1,226.2	1,291.8	1,344.5	1,377.5	1,404.2	1,435.1	3.2	5.0
% Change	4.8	5.4	4.1	2.5	1.9	2.2		
5. Health and Wellness	1,708.7	1,737.9	1,768.7	1,799.3	1,835.2	1,875.2	1.9	6.6
% Change	0.7	1.7	1.8	1.7	2.0	2.2		
6. Creative Professional Services	2,037.8	2,157.6	2,266.8	2,341.5	2,404.0	2,472.8	3.9	8.7
% Change	3.7	5.9	5.1	3.3	2.7	2.9		
7. Construction and Green Services	1,568.6	1,658.0	1,732.2	1,755.9	1,778.8	1,817.7	3.0	6.4
% Change	2.4	5.7	4.5	1.4	1.3	2.2		
8. Retail Trade	1,806.3	1,836.1	1,867.9	1,899.1	1,943.1	1,996.9	2.0	7.0
% Change	2.1	1.6	1.7	1.7	2.3	2.8		
9. Wholesale Trade	1,481.3	1,543.4	1,620.8	1,679.8	1,732.2	1,797.8	4.0	6.3
% Change	0.2	4.2	5.0	3.6	3.1	3.8		
Sum of Clusters	15,478.8	16,095.2	16,690.9	17,139.5	17,566.2	18,061.6	3.1	63.4
% Change	3.2	4.0	3.7	2.7	2.5	2.8		
Other	9,425.8	9,690.8	9,919.6	10,075.9	10,223.7	10,406.1	2.0	36.6
% Change	4.6	2.8	2.4	1.6	1.5	1.8		



Table 10: Sonoma County Historical Productivity (Output per Worker)							
<i>Thousands of current dollars</i>							Compound Ann.
							Growth Rate
	2010	2011	2012	2013	2014	2015	10-15
Total	124.3	128.2	128.8	128.1	127.5	128.8	0.7
% Change	4.3	3.2	0.4	-0.5	-0.5	1.1	
1. Agriculture, Food and Wine	114.0	115.0	121.1	121.6	117.5	116.6	0.5
% Change	-4.3	0.9	5.3	0.4	-3.4	-0.8	
2. Technology-Producing Industries	219.9	223.7	244.9	247.6	263.0	275.2	4.6
% Change	4.7	1.7	9.5	1.1	6.2	4.7	
3. Wealth Management	636.1	675.9	718.4	702.2	736.7	774.8	4.0
% Change	9.1	6.3	6.3	-2.3	4.9	5.2	
4. Tourism	47.7	50.3	49.8	50.4	51.1	53.4	2.3
% Change	4.4	5.3	-0.9	1.3	1.3	4.5	
5. Health and Wellness	89.0	91.9	90.8	90.2	86.6	84.3	-1.1
% Change	4.3	3.2	-1.2	-0.8	-3.9	-2.6	
6. Creative Professional Services	200.3	207.7	219.9	215.4	223.8	229.0	2.7
% Change	8.1	3.7	5.9	-2.1	3.9	2.3	
7. Construction and Green Services	105.6	106.3	105.4	106.1	105.0	107.1	0.3
% Change	1.5	0.7	-0.9	0.7	-1.1	2.0	
8. Retail Trade	75.9	75.9	78.2	80.3	79.8	79.2	0.9
% Change	4.2	0.0	3.1	2.7	-0.6	-0.7	
9. Wholesale Trade	179.0	196.0	194.8	198.3	210.8	219.9	4.2
% Change	9.2	9.5	-0.6	1.8	6.3	4.3	
Sum of Clusters	116.5	119.3	121.3	121.7	122.7	124.7	1.4
% Change	3.3	2.5	1.7	0.4	0.8	1.7	
Other	138.5	143.9	142.2	139.8	135.8	136.1	-0.3
% Change	6.1	3.9	-1.1	-1.7	-2.8	0.2	

Table 11: Sonoma County Forecasted Productivity (Output per Worker)							
Thousands of current dollars							Compound Ann.
							Growth Rate
	2016	2017	2018	2019	2020	2021	16-21
Total	132.6	138.4	144.5	149.8	155.4	161.4	4.0
% Change	2.9	4.4	4.3	3.7	3.7	3.9	
1. Agriculture, Food and Wine	124.1	132.1	139.8	148.3	156.8	165.7	6.0
% Change	6.5	6.5	5.8	6.1	5.7	5.7	
2. Technology-Producing Industries	285.0	299.1	317.2	335.4	354.5	376.2	5.7
% Change	3.6	5.0	6.0	5.7	5.7	6.1	
3. Wealth Management	818.5	836.9	857.5	876.1	894.2	909.9	2.1
% Change	5.6	2.2	2.5	2.2	2.1	1.8	
4. Tourism	53.7	55.8	58.0	59.7	61.5	63.5	3.4
% Change	0.5	4.0	3.9	3.0	2.9	3.3	
5. Health and Wellness	84.8	86.8	88.8	90.8	93.3	96.1	2.6
% Change	0.5	2.4	2.3	2.2	2.8	3.1	
6. Creative Professional Services	231.5	241.2	252.5	263.0	274.0	286.1	4.3
% Change	1.1	4.2	4.7	4.1	4.2	4.4	
7. Construction and Green Services	107.8	111.7	115.1	117.3	119.9	123.3	2.7
% Change	0.6	3.6	3.0	1.9	2.3	2.8	
8. Retail Trade	81.2	85.0	89.1	92.8	96.9	101.6	4.6
% Change	2.5	4.7	4.7	4.2	4.5	4.8	
9. Wholesale Trade	221.9	236.1	252.1	265.8	279.3	295.2	5.9
% Change	0.9	6.4	6.8	5.4	5.1	5.7	
Sum of Clusters	127.2	132.9	139.0	144.4	150.1	156.5	4.2
% Change	2.0	4.5	4.5	3.9	3.9	4.2	
Other	142.3	148.5	154.5	159.8	165.0	170.5	3.7
% Change	4.6	4.3	4.1	3.4	3.3	3.3	

Table 12: Sonoma County Historical Productivity (Output per Worker)							
Thousands of 2009 dollars							Compound Ann.
							Growth Rate
	2010	2011	2012	2013	2014	2015	10-15
Total	123.0	124.5	122.1	118.8	115.6	115.6	-1.2
% Change	3.2	1.2	-1.9	-2.7	-2.7	0.0	
1. Agriculture, Food and Wine	111.0	105.2	104.9	101.5	96.3	96.7	-2.7
% Change	-6.8	-5.2	-0.2	-3.3	-5.1	0.4	
2. Technology-Producing Industries	222.7	229.2	249.4	249.6	261.3	271.6	4.0
% Change	6.1	2.9	8.8	0.1	4.7	3.9	
3. Wealth Management	631.1	662.9	682.9	644.7	663.6	664.6	1.0
% Change	8.2	5.0	3.0	-5.6	2.9	0.1	
4. Tourism	47.7	50.2	47.8	47.1	46.5	46.7	-0.4
% Change	4.4	5.2	-4.6	-1.5	-1.4	0.6	
5. Health and Wellness	87.1	89.0	86.4	85.1	81.1	77.9	-2.2
% Change	2.0	2.2	-2.8	-1.5	-4.7	-4.0	
6. Creative Professional Services	199.9	206.6	216.6	209.9	214.9	219.2	1.9
% Change	7.9	3.3	4.9	-3.1	2.4	2.0	
7. Construction and Green Services	107.5	107.2	104.0	101.4	94.6	93.4	-2.8
% Change	3.3	-0.3	-2.9	-2.5	-6.7	-1.3	
8. Retail Trade	75.2	73.1	72.5	73.9	72.4	71.8	-0.9
% Change	3.3	-2.9	-0.8	1.9	-2.1	-0.7	
9. Wholesale Trade	174.9	187.2	180.4	181.9	191.7	198.4	2.6
% Change	6.7	7.1	-3.6	0.8	5.4	3.5	
Sum of Clusters	115.7	116.7	115.5	113.8	112.5	112.9	-0.5
% Change	2.6	0.9	-1.0	-1.5	-1.1	0.3	
Other	136.3	138.3	134.0	127.9	121.1	120.4	-2.5
% Change	4.5	1.5	-3.1	-4.6	-5.3	-0.6	

Table 13: Sonoma County Forecasted Productivity (Output per Worker)							
Thousands of 2009 dollars							Compound Ann.
							Growth Rate
	2016	2017	2018	2019	2020	2021	16-21
Total	117.4	120.2	122.4	124.0	126.0	128.4	1.8
% Change	1.6	2.3	1.9	1.3	1.6	1.9	
1. Agriculture, Food and Wine	102.4	106.6	109.9	113.7	117.6	121.7	3.5
% Change	5.9	4.2	3.1	3.4	3.4	3.5	
2. Technology-Producing Industries	277.1	284.7	294.5	303.9	314.5	327.2	3.4
% Change	2.0	2.8	3.4	3.2	3.5	4.0	
3. Wealth Management	692.4	693.8	694.0	692.1	691.9	690.3	-0.1
% Change	4.2	0.2	0.0	-0.3	0.0	-0.2	
4. Tourism	46.1	47.0	47.7	48.0	48.3	49.0	1.2
% Change	-1.3	1.9	1.4	0.5	0.8	1.3	
5. Health and Wellness	77.1	77.4	77.3	77.2	77.7	78.5	0.4
% Change	-1.0	0.4	-0.1	-0.2	0.7	1.1	
6. Creative Professional Services	218.4	222.8	227.6	231.3	236.0	241.6	2.0
% Change	-0.3	2.0	2.2	1.6	2.0	2.4	
7. Construction and Green Services	92.9	94.3	94.9	94.5	94.7	95.5	0.6
% Change	-0.5	1.5	0.7	-0.5	0.2	0.8	
8. Retail Trade	72.7	74.6	76.3	77.6	79.4	81.6	2.3
% Change	1.2	2.6	2.3	1.7	2.3	2.8	
9. Wholesale Trade	197.8	206.3	215.1	221.5	227.9	236.3	3.6
% Change	-0.3	4.3	4.3	3.0	2.9	3.7	
Sum of Clusters	113.7	116.4	118.8	120.6	122.8	125.5	2.0
% Change	0.7	2.4	2.1	1.5	1.8	2.2	
Other	124.2	127.0	129.0	130.3	131.8	133.6	1.5
% Change	3.2	2.2	1.6	1.0	1.1	1.3	

## PRESENTING LEVEL



## FOUNDATION LEVEL



## PREMIER LEVEL



## EXECUTIVE LEVEL

American AgCredit  
American River Bank  
City of Santa Rosa  
Comcast  
George Petersen Insurance  
Keegan & Coppin Co.

Midstate Construction  
NorBAR  
Sonoma County Alliance  
Summit State Bank  
Vantreo Insurance  
Zainer Rinehart Clarke

## MEDIA LEVEL



Sonoma County Board of Supervisors